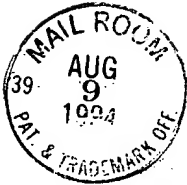


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ABSTRACT OF THE DISCLOSURE

A thermokeratoplasty system and method for locally heating and reshaping a cornea in a manner that produces a minimal regression of the corneal correction. The system includes a probe that is coupled to a power source which can provide a predetermined power, frequency and time duration that creates a thermal profile within the cornea which extends from the epithelium into the corneal stroma. The electrical return of the probe is a lid speculum which maintains the eye lids in an open position. The probe is placed into contact with the cornea and energy is transferred from the power source to the eye, through the lid speculum and back to the power source. The energy from the power supply is focused by a probe tip that locally heats and denatures the cornea, and causes a subsequent shrinkage of corneal tissue. A pattern of denatured areas can be created around the cornea to correct the vision of the eye. It has been found that power no greater than 1.2 watts, for a duration no greater than 1.0 seconds, will sufficiently induce corneal shrinkage without significant regression of the visual acuity correction of the eye. The probe may have an electronic circuit which prevents usage of the probe after a predetermined number of procedures.

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